

CLAIMS

WE CLAIM

1. A header for attachment to a harvester comprising:

5 a main frame forming a structure having an upright rear portion forming a rear side of the header and a bottom portion extending forward from a lower end of the upright rear portion and terminating in a front edge of the header, the main frame extending longitudinally between opposite ends of the header transverse to a direction of travel of a harvester;

10 first and second ground engaging wheels, each wheel being removably mounted to the header in a transport position in which the wheels are aligned with the longitudinal length of the header for lengthwise towing of the header, each wheel being rotatable upon a spindle;

15 a front transport wheel spindle receiver for removably mounting one wheel in the transport position along the front edge of the header and a rear transport wheel spindle receiver for removably mounting the other wheel in a transport position on the rear side of the header;

20 the front transport wheel spindle receiver being mounted to a swing arm rotatable coupled to the bottom portion of the frame to extend downwardly and forwardly therefrom in the transport position, the swing arm being rotatable to a stowed position extending rearwardly along the bottom portion of the frame; and

25 a brace coupled to the swing arm to hold the swing arm in both the transport and the stowed positions, the brace in the transport position being removably coupled to the frame adjacent the frame front edge and extending downward therefrom to the swing arm, and the brace in the stowed position extending upwardly along the upright rear portion and being removably coupled thereto.

30 2. The header as defined by claim 1 further comprising an attachment frame coupled to the main frame for mounting the header to the harvester and wherein the rear transport wheel spindle receiver is carried by the attachment frame.

3. The header as defined by claim 1 wherein the swing arm rotates about a generally horizontal axis extending transverse to the harvester travel direction when the swing arm is moved between the transport and stowed positions.

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4. The header as defined by claim 1 wherein the main frame includes an upper beam extending longitudinally between the opposite ends of the header at an upper end of the upright rear portion of the main frame, a front cross member extending longitudinally between the opposite ends of the header at the front edge and a plurality of support arms connected to and extending between the upper beam and the front cross member, the support arms each having an upright rear portion and a forwardly extending bottom portion.

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5. The header as defined by claim 4 wherein the swing arm is rotatably coupled to the forwardly extending bottom portion of one of the support arms.

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6. The header as defined by claim 4 wherein the brace is coupled to the upper beam in the stowed position and wherein the brace is coupled to the front cross member in the transport position.

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7. The header as defined by claim 4 further comprising an elongated trailer tongue carried by the bottom portion of one or more of the support arms for movement between a retracted, stowed position and a transport position in which a portion of the trailer tongue extends outward beyond one end of the frame for attachment to a towing vehicle.

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8. The header as defined by claim 7 further comprising a pivot arm carried by an outboard support arm to support the trailer tongue, the pivot arm having a stowed position and a lowered transport position to lower the tongue beneath the support arms of the main frame in the transport position.

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9. The header as defined by claim 8 further comprising a cradle mounted to the pivot arm and surrounding the trailer tongue and through which the trailer tongue slides between the stowed and transport positions to raise and lower the pivot arm as the trailer tongue is moved between the stowed and transport positions.

10. The header as defined by claim 1 further comprising an elongated trailer tongue carried by the main frame bottom portion for movement between a retracted, stowed position and a transport position in which a portion of the tongue extends outward beyond one end of the frame for attachment to a towing vehicle.

11. The header as defined by claim 10 further comprising a tongue jack having a transport position coupled to the trailer tongue when the trailer tongue is in the transport position and a stowed position removably mounted to the main frame.

12. The header as defined by claim 11 wherein the tongue jack is mounted to the trailer tongue and to the main frame by at least one pin.

13. The header as defined by claim 1 wherein a distal end of the swing arm includes a sleeve with the spindle receiver mounted therein for rotation of the spindle receiver about a sleeve axis, the spindle receiver being coupled to the brace for rotation of the brace and the spindle receiver about the sleeve axis, and further comprising a pin to fix the brace to the swing arm in the transport position to prevent rotation of the brace and the spindle receiver about the sleeve axis.

14. The header as defined by claim 13 wherein the pin between the brace and the swing arm is removed to move the brace and the swing arm from the transport position to the stowed position.

15. The header as defined by claim 1 wherein each of the ground engaging wheels is held in the respective spindle receiver by a pin extending through the spindle receiver and the spindle associated with each wheel wherein the spindle is retained in the spindle receiver and prevented from rotation therein and wherein the spindles are removed from the spindle receivers by withdrawing the pins.

16. The header as defined by claim 1 wherein the ground engaging wheels are held in the respective spindle receivers by pins and the brace is coupled to the main frame in both the transport and stowed positions by pins whereby the wheels can be removed and the swing arm moved between the stowed and transport positions without the use of tools.

17. The header as defined by claim 16 further comprising an elongated trailer tongue carried by the main frame for movement between a retracted, stowed position and a transport position in which a portion of the tongue extends outward beyond one end of the frame for attachment to a towing vehicle and one or more pins holding the trailer tongue in the retracted, stowed position and the transport position.

18. The header as defined by claim 1 further comprising gauge wheel mounts on the main frame for mounting the ground engaging wheels to the main frame aligned with the direction of working travel to support the header upon the ground, the gauge wheel mounts each including a spindle receiver for mounting the wheels.

19. The header as defined by claim 18 further comprising pins for mounting the wheels in the spindle receivers of the gauge wheel mounts.

20. The header as defined by claim 1 further comprising first and second light bars mounted to the main frame at one end thereof, the light bars having transport positions in which one bar extends forward and the other bar extends rearward from the main frame in the direction of harvesting to identify the width of the header during lengthwise transport and wherein the bars having stowed positions in which the bars do not extend from the main frame.

21. The header as defined by claim 20 further comprising a cover on the end of the main frame to conceal the light bars when in the stowed positions to protect the lights from damage during harvesting.

22. The header as defined by claim 20 further comprising pins to retain the light bars in the stowed and transport positions whereby the light bars can be moved between the stowed and transport positions without the use of tools.

23. A header for attachment to a harvester comprising:
a main frame extending longitudinally between opposite ends of the header transverse to a direction of travel of a harvester;
first and second ground engaging wheels, each wheel being removably mounted to the header in a transport position in which the wheels are aligned with the longitudinal length of the header for lengthwise towing of the header, each wheel further having a second position removably mounted to the header for harvesting of the header; and
one or more pins for coupling each wheel to the header in the transport and second positions wherein the wheels can be moved between the transport and second positions without the use of tools.

24. The header as defined by claim 23 wherein the second position of the wheels is a gauge wheel position wherein the wheels support the ends of the header during harvesting.

25. The header as defined by claim 24 further comprising an elongated trailer tongue carried by the main frame for movement between a retracted, stowed position and a transport position in which a portion of the tongue extends outward beyond one end of the frame for attachment to a towing vehicle and one or more pins holding the trailer tongue in the retracted, stowed position and in the transport position.

26. The header as defined by claim 25 further comprising at least one light bar mounted to the main frame at one end thereof, the light bar having transport position in which the light bar extends from the main frame in the direction of travel of the harvester to identify the width of the header during lengthwise transport and wherein the light bar has a stowed position in which the light bar does not extend from the main frame, the light bar being retained in the transport and harvest positions by a pin.

27. A header for attachment to a harvester comprising a main frame having opposite ends and a pair of light bars attached to one of the ends, the light bars having transport positions in which one bar extends forward and the other bar extends rearward from the main frame to identify the width of the header during transport and the bars having stowed positions in which the bars do not extend from the end of the main frame.

28. The header as defined by claim 27 further comprising a cover on the end of the main frame to conceal the light bars when in the stowed positions to protect the lights from damage during harvesting.

29. The header as defined by claim 27 further comprising pins to retain the light bars in the stowed and transport positions whereby the light bars can be moved between the stowed and transport positions without the use of tools.

30. An implement comprising:

a frame forming a structure having a rear side and terminating in a front edge, the frame extending longitudinally between opposite ends of the implement transverse to a direction of travel of the implement when in use;

5 first and second ground engaging wheels, each wheel being removably mounted to the implement in a transport position in which the wheels are aligned with the longitudinal length of the implement for lengthwise towing of the implement for transport of the implement, each wheel being rotatable upon a spindle;

10 a front transport wheel spindle receiver for removably mounting one wheel in the transport position along the front edge of the implement and a rear transport wheel spindle receiver for removably mounting the other wheel in a transport position on the rear side of the implement;

15 the front transport wheel spindle receiver being mounted to a swing arm rotatable coupled to the frame to extend downwardly and forwardly therefrom in the transport position, the swing arm being rotatable to a stowed position extending rearwardly; and

20 a brace coupled to the swing arm to hold the swing arm in both the transport and the stowed positions, the brace in the transport position being removably coupled to the frame adjacent the frame front edge and extending downward therefrom to the swing arm, and the brace in the stowed position extending upwardly along the rear side of the frame and being removably coupled thereto.

25 31. The implement as defined by claim 30 wherein the swing arm rotates about a generally horizontal axis extending transverse to the implement travel direction during use when the swing arm is moved between the transport and stowed positions.

32. The implement as defined by claim 30 further comprising an elongated trailer tongue carried by the frame for movement between a retracted, stowed position and a transport position in which a portion of the tongue extends outward beyond one end of the frame for attachment to a towing vehicle.

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33. The implement as defined by claim 32 further comprising a tongue jack having a transport position coupled to the trailer tongue when the trailer tongue is in the transport position and a stowed position removably mounted to the frame.

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34. The implement as defined by claim 33 wherein the tongue jack is mounted to the trailer tongue and to the frame by at least one pin.

35. The implement as defined by claim 30 wherein a distal end of the swing arm includes a sleeve with the spindle receiver mounted therein for rotation of the spindle receiver about a sleeve axis, the spindle receiver being coupled to the brace for rotation of the brace and the spindle receiver about the sleeve axis, and further comprising a pin to fix the brace to the swing arm in the transport position to prevent rotation of the brace and the spindle receiver about the sleeve axis.

36. The implement as defined by claim 30 wherein each of the ground engaging wheels is held in the respective spindle receiver by a pin extending through the spindle receiver and the spindle associated with each wheel wherein the spindle is retained in the spindle receiver and prevented from rotation therein and wherein the spindles are removed from the spindle receivers by withdrawing the pins.

37. The implement as defined by claim 30 wherein the ground engaging wheels are held in the respective spindle receivers by pins and the brace is coupled to the frame in both the transport and stowed positions by pins whereby the wheels can be removed and the swing arm moved between the stowed and transport positions without the use of tools.

38. The implement as defined by claim 30 further comprising first and second light bars mounted to the frame at one end thereof, the light bars having transport positions in which one bar extends forward and the other bar extends rearward from the frame in the direction of travel during use to identify the width of the implement during lengthwise transport and wherein the bars having stowed positions in which the bars do not extend from the frame.

39. The implement as defined by claim 38 further comprising a cover on the end of the frame to conceal the light bars when in the stowed positions to protect the lights from damage during harvesting.